DCMTK - Bug #459

Wrong "Host type" on Windows 7 (64 bit) system with 64 bit binaries

2012-11-01 12:07 - Jörg Riesmeier

Status:	Closed		**Start date:**	2012-11-01
Priority:	Normal		**Due date:**	
Assignee:	Uli Schlachter		**% Done:**	100%
Category:	Configuration		**Estimated time:**	0:00 hour
Target version:	3.6.2			
Module:			**Compiler:**	
Operating System:				

Description

The --version output of a command line tool is "Host type: x86-Windows", i.e. there is no indication on 64 bit support.

History

#1 - 2012-11-01 12:26 - Jörg Riesmeier

- Assignee set to Uli Schlachter

#2 - 2012-11-05 10:05 - Uli Schlachter

- Priority changed from Normal to Low

ofconapp.cc: (*output) << OFendl << "Host type: " << CANONICAL_HOST_TYPE << OFendl;

So we are looking at CANONICAL_HOST_TYPE which comes from the configure machinery. CMake sets it via:

```
SET(CANONICAL_HOST_TYPE "${CMAKE_SYSTEM_PROCESSOR}-${CMAKE_SYSTEM_NAME}")
```

CMAKE_SYSTEM_PROCESSOR is documented as:

```
The name of the CPU CMake is building for.

On systems that support uname, this variable is set to the output of
      uname -p, on windows it is set to the value of the environment
      variable PROCESSOR_ARCHITECTURE
```

So I guess the 64 bit binaries were built on a 32 bit system?

Looking through the list of variables CMake defines, I don't really see anything which sounds more appropriate. And apparently CMake can't tell you if you are building 64 bit binaries or not (well, the CMake mailing list suggests looking at the size of a void pointer...).

#3 - 2012-11-05 19:47 - Jörg Riesmeier

No, the DCMTK binary was really build on a 64-bit Windows system with Visual Studio 2010 Professional (64-bit). The selected CMake generator was (something like): Visual Studio 2010 (Win64)

#4 - 2012-11-05 19:47 - Jörg Riesmeier

- Priority changed from Low to Normal

#5 - 2012-11-06 10:21 - Uli Schlachter

- Status changed from New to Closed

- % Done changed from 0 to 100

CMake says: "Works as documented"   http://public.kitware.com/Bug/print_bug_page.php?bug_id=9065

MSDN says: http://msdn.microsoft.com/en-us/library/aa384274(VS.85).aspx

```
commit aeb0390fb70f5390b7e253e67da6c261f3228183
Author: Uli Schlachter <dicom@offis.de>
Date:   Tue Nov 6 10:18:28 2012 +0100

    Correctly detect the processor type on 64 bit windows.
```

```
[...]
+# Windows being windows, it lies about its processor type to 32 bit binaries
+SET(SYSTEM_PROCESSOR "$ENV{PROCESSOR_ARCHITEW6432}")
+IF(NOT SYSTEM_PROCESSOR)
+  SET(SYSTEM_PROCESSOR "${CMAKE_SYSTEM_PROCESSOR}")
+ENDIF(NOT SYSTEM_PROCESSOR)
 # CMake doesn't provide a configure-style system type string
-SET(CANONICAL_HOST_TYPE "${CMAKE_SYSTEM_PROCESSOR}-${CMAKE_SYSTEM_NAME}")
+SET(CANONICAL_HOST_TYPE "${SYSTEM_PROCESSOR}-${CMAKE_SYSTEM_NAME}")
+UNSET(SYSTEM_PROCESSOR)
```